

Serial No. 09/877,773

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In the Specification:

The applicant makes the following changes to the specification:

The paragraph bridging pages 5 and 6 (page 5 line 22 to page 6 line 14) is corrected to read as follows:

In a commercial embodiment, the probe 12 is configured to illuminate and collect light scattered from samples, not shown, that are situated in front of optical window 26 at a front end of nose cone 24 as shown in FIG. 5. Probe 12 includes a housing 14 in the form of a generally cylindrical member 22 and includes a nose cone 24 containing an optical window 26. The optical window 26 can comprise a simple opening through which light can pass, but in a preferred embodiment the optical window 26 comprises a sapphire window mounted within the nose cone 24 to protect the optics within probe 12 from airborne dust and assorted particles. The probe 12 can be easily positioned relative to a sample by means of handle 28 that can constitute a coupling structure for robotic manipulation. A trigger 30 is situated on the handle 28 for easy operation by an operator's index finger. Alternatively, the trigger 30 can be computer controlled. A longitudinal rail 32 is fixed to handle 28 or equivalent robotic coupling structure to provide a foundation for the optical components within the probe 12. The generally cylindrical housing member 22 includes a longitudinal slot 16, the edges 18 of which contact opposing edges of the longitudinal rail 32. The housing 22 is completed by back wall 34 having an outer perimeter 64. In the preferred embodiment, the generally cylindrical housing member 22 has an internal diameter of about 6.0 cm. It is understood, however, that the internal diameter and other dimensions of housing member 22 can vary in accordance with the constraints imposed on the system by its intended use as well as the components to be housed therein. In the preferred embodiment, the housing member 22, nose cone 24, longitudinal rail 32, and back wall 34 are construction of aluminum that has been black anodized. However, a wide variety of metals, copolymers, and composites can be used to construct probe 12 in accordance with the present invention.

Serial No. 09/877,773

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The full paragraph on page 6 (lines 15-31) is corrected to read as follows:

The longitudinal rail 32 includes a lower surface 31, an upper surface 33, a rearward end 35, and a forward end 37 as shown in Fig. 5. A plurality of lateral slots 39a through 39g are milled into the upper surface 33 of the longitudinal rail 32 generally perpendicular to the length dimension of the longitudinal rail 32, except slot 39c which is inclined at an angle of about 10°. Pivot pins 38 are fixed in the center of each of the lateral slots 39a and 39c to permit small adjustments in the alignment of the supports fastened therein. Probe 12 employs sampling optics 42 to collect the scattered Raman radiation, discriminating with an extinction ratio of about 10⁶ (1 ppm) or better for the Raman-shifted component. Support 46 is fastened in slot 39e to hold lens 36 adjacent the exit end 41 of optical fiber 66 carrying light from a laser source. Support 49 is fastened in slot 39b to hold a band pass filter 48, which controls the wavelength and deviation of the source light directed toward the sample through optical window 26. Support 51 is fastened in slot 39a to hold an objective lens system 54 and mirror 50. Supports 46 and 49 also support the ends of baffling tube 47 creating a specific segregated region 44 within the housing 22 between the lens 36 and band pass filter 48.

The paragraph bridging pages 6 and 7 (page 6, line 32 to page 7 line 15) is corrected to read as follows:

Support 52 is fastened in inclined slot 39c to hold optical filter 76, which can be an interference or holographic filter and preferably is a long pass filter designed to reflect light having a wavelength equal to or less than the wavelength of the laser source and transmit light having a wavelength longer than the laser source. Support 56 is fastened in slot 39d to hold a lens 74 having a focal length selected to direct the Raman or other characteristic spectral signal passing through the optical filter 76 on to the entrance end 53 of spatial filter 55. Support 58 is fastened in slot 39e to hold the entrance end 53 of spatial filter 55. The entrance end 53 of the spatial filter 55 includes an aperture 65 that is generally round and preferably has an area of about 1mm² or less. Support 40 is fastened in slot 39g to hold the exit end 57 of

Serial No. 09/877,773

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spatial filter 55 that also holds the entrance end of optical fiber bundle 62 that carries the characteristic Raman or other spectral signal produced from a sample through the fiber-optic bundle 62 to appropriate instruments capable for evaluating the spectral signal. The specific structure of the preferred embodiment of the spatial filter 55 is disclosed in co-pending U.S. Patent application SN 09/447,878 filed November 23, 1999, now U.S. Patent 6,310,686, which is hereby incorporated by reference.